Model Development Phase

Date	2 October 2024
Team ID	SWTID1726888137
Project Title	intelligent handwritten digit identification system for computer applications
Maximum Marks	5 Marks

Model Selection Report

In the model selection report for future deep learning and computer vision projects, various architectures, such as CNNs or RNNs, will be evaluated. Factors such as performance, complexity, and computational requirements will be considered to determine the most suitable model for the task at hand.

Model Selection Report:

Model	Description
Model 1	**Convolutional Neural Network (CNN)**: This model consists of multiple convolutional layers followed by batch normalization, pooling, and dropout layers, which help in learning spatial hierarchies of features. The input shape is (28, 28, 1) to accommodate grayscale images of handwritten digits. The architecture includes two convolutional layers with 32 and 64 filters, respectively, a max pooling layer, and two fully connected layers. The model uses ReLU activation for hidden layers and softmax activation in the output layer to classify the 10-digit classes. The use of batch normalization and dropout helps prevent overfitting and improves generalization performance.